泰莱微波
Talent Microwave

Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

Power Amplifier

1MHz-200MHz /45dB Gain/45dBm Psat

Model: TLPA1M200M-45-45

TLPA1M200M-45-45 is a power amplifier with small signal gain of 45 dB and Psat of 45 dBm across the frequency range of 1 to 200 MHz. The DC power requirement for the amplifier is +28 VDC/5 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 1-200MHz
- Gain: 45dB Min
- Output Power Psat: 45dBm Min
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
频率范围 Frequency range	1		200	MHz
小信号增益 Small Signal Gain	45	47		dB
增益平坦度 Gain Flatness			±3	dB
线性输出功率 Output P1dB	43			dBm
饱和输出功率 Output Psat	45			dBm
输入驻波 Input VSWR		1.5	2	:1
直流电压 DC Voltage		28		V DC
直流电流 DC Supply Current		5		A
阻抗 Impedance		50		Ohms

*Performance may degrade below 300 MHz. Please refer to below typical test plots

Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

机械特性 Mechanical Specifications:

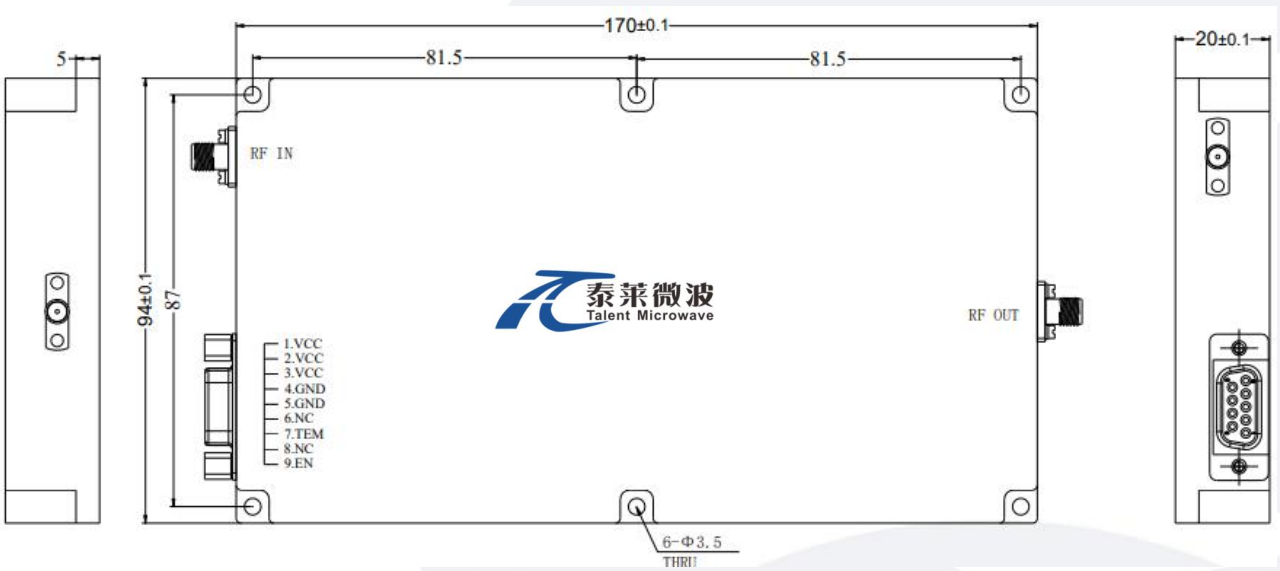
参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	SMA Female/SMA Female	
直流偏置 DC Bias	DSUB-9	
尺寸 Size	170*94*20(Without Heatsink) 264*140*82(With Heatsink)	mm
重量 Weight	3.7	Kg

绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+30 V
输入功率 RF Input Power	+5 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

外形图 Outline Drawing:

Unit:mm;Tolerance:±0.1mm



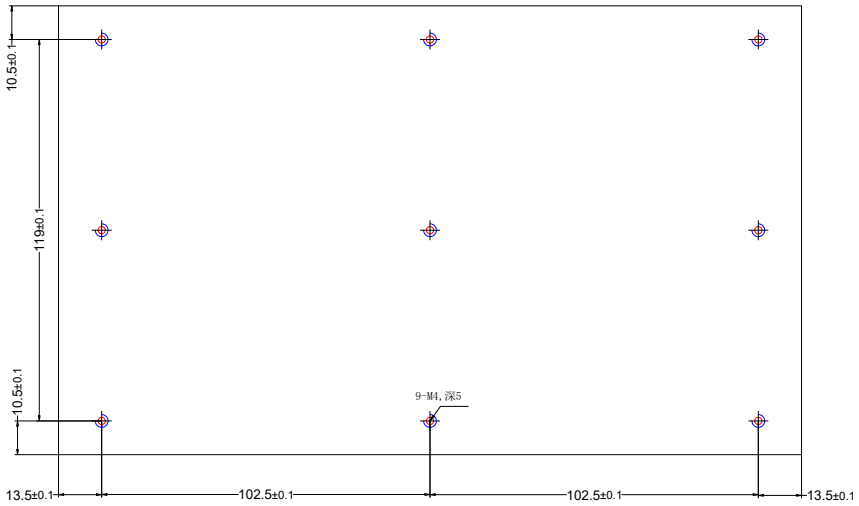
***Heat Sink Required During Operation

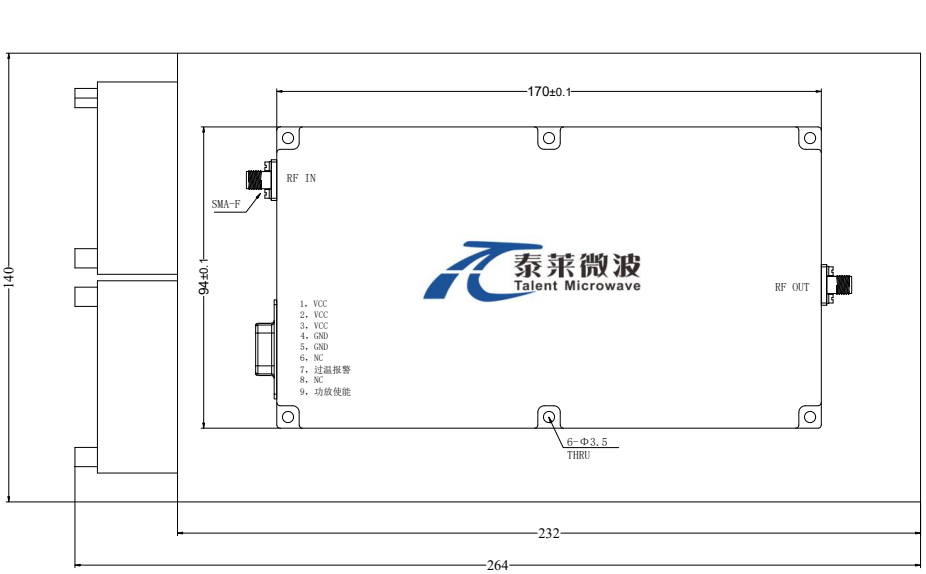
OBSERVE PRECAUTIONS
ELECTROSTATIC SENSITIVE
DEVICES

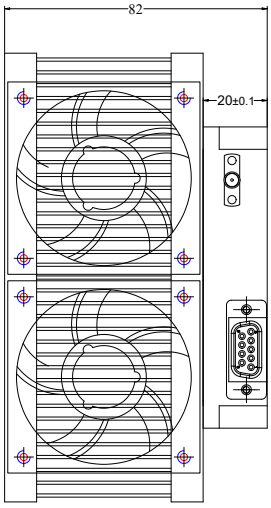
Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

外形图 Outline Drawing:

Unit:mm; Tolerance:±0.1mm







风扇供电 Fans Supply Current: 0.3A@24~28V

Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

直流供电接口 DC Supply Connector（DSUB-9 Female):

引脚 Pin	名称 Name	功能 Function
1	+28V	+26.0-30.0VDC
2	+28V	+26.0-30.0VDC
3	+28V	+26.0-30.0VDC
4	GND	Ground
5	GND	Ground
6	NC	Not connected
7	Over TEM	When the temperature of the case exceeds 85 ℃, the power amplifier will turn off and this pin will be pulled high. If the temperature of case drops to 70 ℃, the power amplifier will return to normal operation, and this pin will be pulled low.
8	NC	Not connected
9	EN	Amplifier Enable: TTL High (5V) (Internally Pulled-High) Amplifier Disable: Short to ground

温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature*	-40		+50	℃
存储温度 Non-operating Temperature*	-50		+60	℃
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

*Note: For a wider temperature range, please consult the manufacturer.

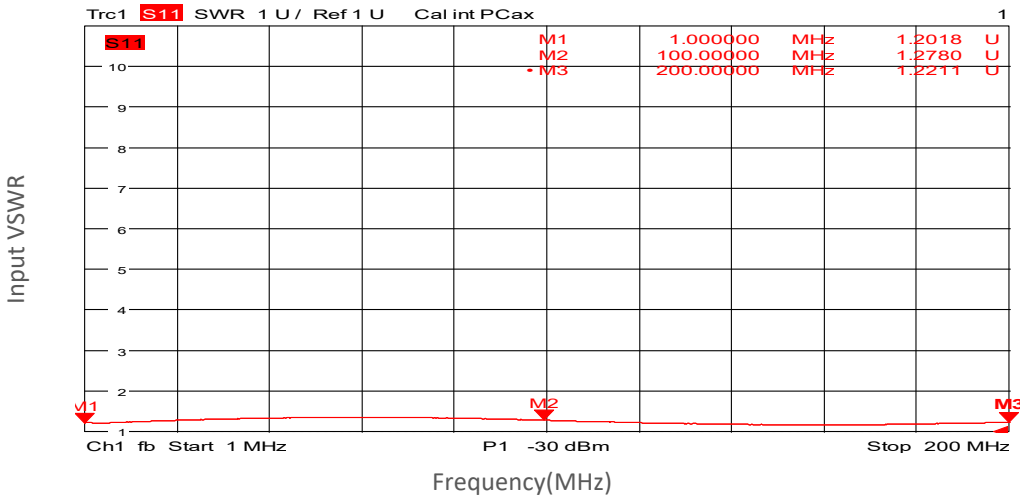
订货信息 Ordering Information:

标准型号 Base Number	描述 Desciption	版本号 Revision
TLPA1M200M-45-45	Power amplifier 1-200MHz,Gain:45dB,Psat:45dBm, +28V DC,Without Heatsink	Rev.1.1
TLPA1M200M-45-45-HS	Power amplifier 1-200MHz,Gain:45dB,Psat:45dBm, +28V DC,With Heatsink	Rev.1.1

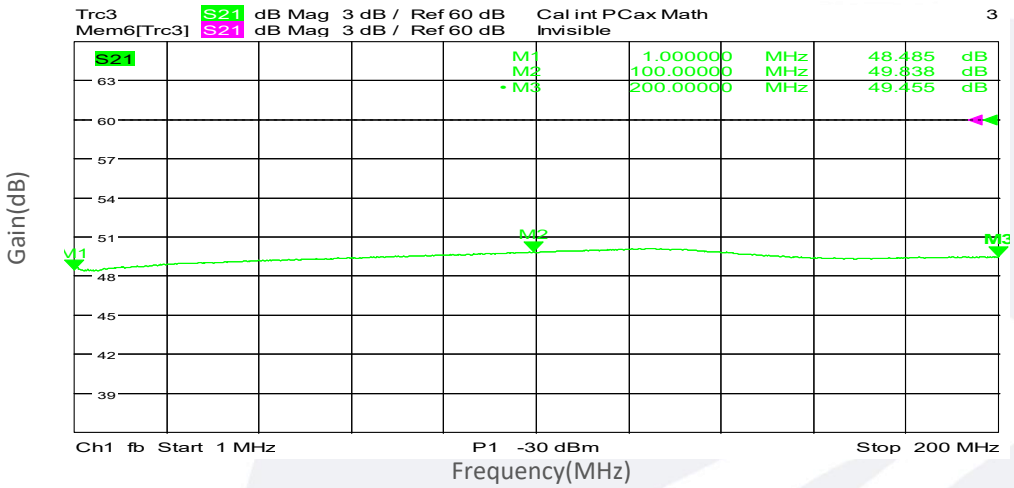
Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

典型曲线 Typical Performance Data:

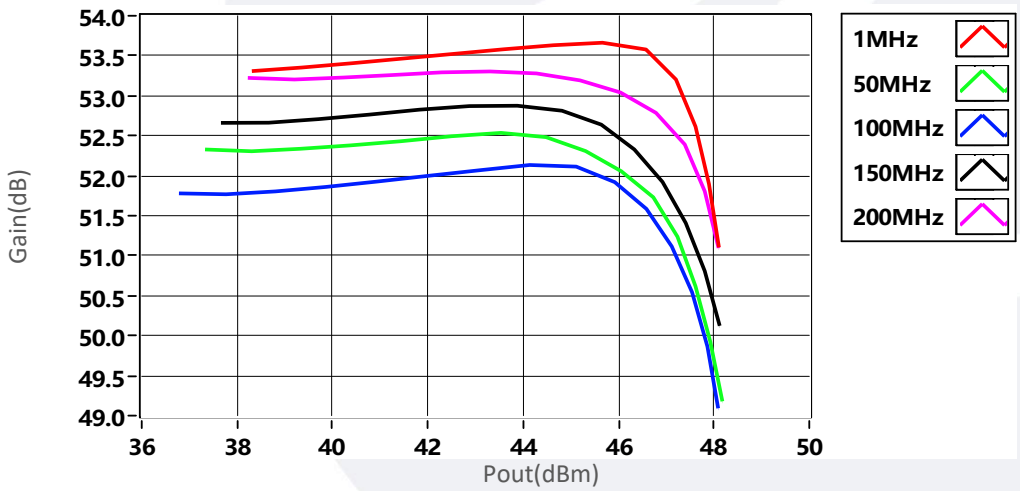
Input VSWR vs Frequency



Small Signal Gain vs Frequency



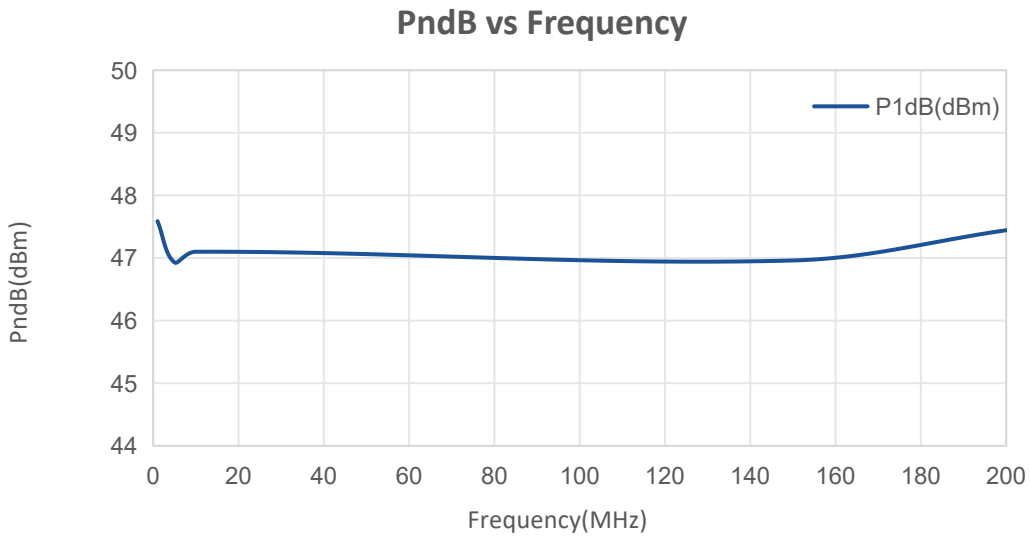
Gain vs Output Power

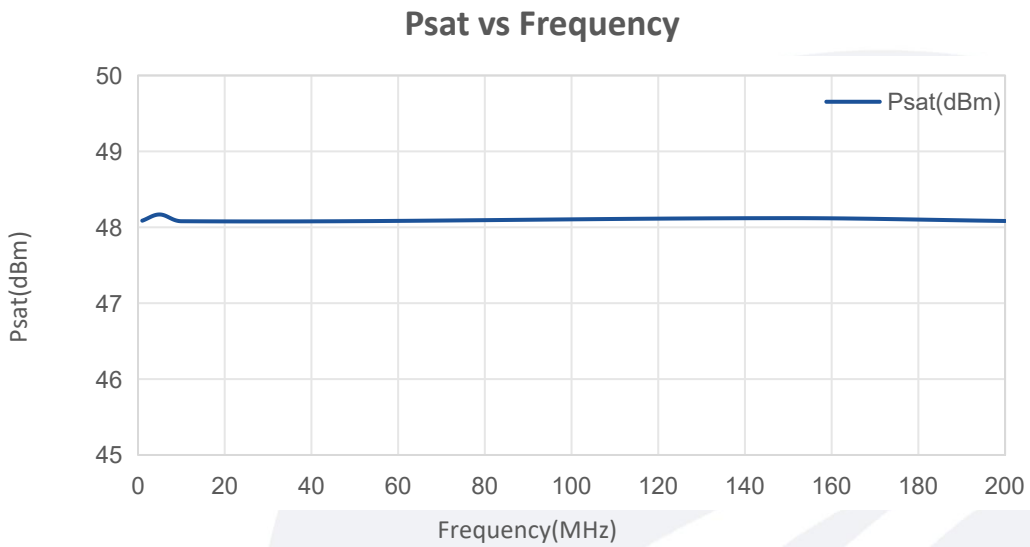


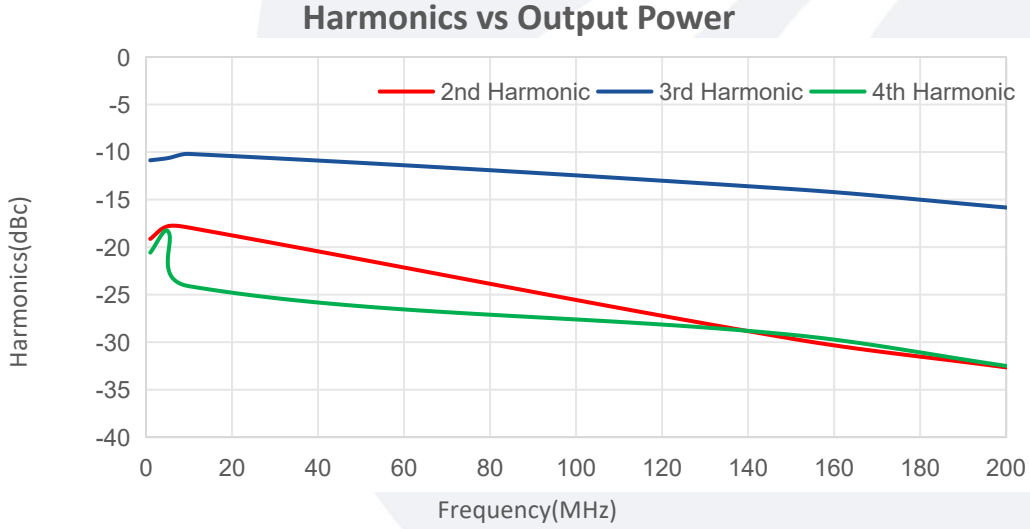
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

典型曲线 Typical Performance Data:







Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.